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PATENT APPLICATION

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IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Kemal GULER et al.

Confirmation No.: 9384

Application No.: 09/903,075

Examiner: Sara M. Chandler

Filing Date: July 10, 2001

Group Art Unit: 3693

Title: A METHOD AND SYSTEM FOR SELECTING AN OPTIMAL AUCTION FORMAT

Mail Stop Appeal Brief-Patents
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TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 03/28/2007.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month
\$120

☐ 2nd Month
\$450

☐ 3rd Month
\$1020

☐ 4th Month
\$1590

☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$500. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Respectfully submitted,
Kemal GULER et al.

By [Signature]

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellant: Guler, et al. Patent Application
Application No.: 09/903,075 Group Art Unit: 3693
Filed: July 10, 2001 Examiner: Chandler, S.
For: A METHOD AND SYSTEM FOR SELECTING AN OPTIMAL AUCTION
FORMAT

APPEAL BRIEF

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01 FC:1402 500.00 DA

HP-10014768
Application No.: 09/903,075

Group Art Unit: 3693



I. Real Party in Interest

The assignee of the present invention is Hewlett-Packard Development Company,

L.P.

II. Related Appeals and Interferences

There are no related appeals or interferences known to the Appellants.

III. Status of Claims

Claims 1-24 are rejected. This Appeal involves Claims 1-24.

IV. Status of Amendments

All proposed amendments have been entered. An amendment subsequent to the Final Action has not been filed.

V. Summary of Claimed Subject Matter-

Independent Claims 1, 10 and 17 of the present application pertain to embodiments associated with a method for describing and comparing data center physical and logical topologies and device configurations.

As recited in Claim 1, a “method for determining an auction format for a market” is described. This embodiment is depicted at least in Figures 2-9 and 12. As shown in Figure 12 and described on page 35 lines 19-24, At step 121 of process 120, characteristics of the market are selected. Step 121 is described in further detail in process 40 of FIG. 4.

At step 122 of Figure 12, a relevant bidding model is selected. Step 122 is further described in detail in process 50 of FIG. 5 including page 40 lines 13-25. Including, selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and the characteristics of the market.

At step 123 of Figure 12, a structure of said market is estimated. Step 123 is further described in detail in process 60 of FIG. 6 including page 41 lines 11-16. Including, selecting at least a first and a second estimated structure of the market.

At step 124 of Figure 12, a bidding behavior is predicted. Step 124 is further described in detail in process 70 of FIG. 7 including page 43 lines 15-22 and page 44 lines 1-5. Including, predicting a first bidding behavior utilizing the first estimated structure of the market, the characteristics of the market and the relevant bidding model; predicting at least a second bidding behavior utilizing at least the second estimated structure of the market, the characteristics of the market and the relevant bidding model.

At step 125 of Figure 12, a first outcome of the market is predicted. Step 125 is further described in detail in process 80 of FIG. 8 including page 44 lines 7-20. Including, predicting a first outcome of the market based on the first bidding behavior and predicting a second outcome of the market based on at least the second bidding behavior. At step 126, the first outcome of the market is evaluated. Step 126 is further described in detail in process 90 of FIG. 9 at page 45 lines 13-17, including the first outcome of the market and at least the second outcome of the market to determine an auction format for the market.

As recited in Claim 9, A computer system (page 47 lines 1-8) of Figure 10 comprising: a bus 1001; a memory 1010 interconnected with the bus 1001; and a processor 1050 interconnected with the bus 1001, wherein the processor 1050 executes a method for “determining an auction format for a market” is described. This embodiment is depicted at least in Figures 2-9 and 12. As shown in Figure 12 and described on page 35 lines 19-24, At step 121 of process 120, characteristics of the market are selected. Step 121 is described in further detail in process 40 of FIG. 4.

At step 122 of Figure 12, a relevant bidding model is selected. Step 122 is further described in detail in process 50 of FIG. 5 including page 40 lines 13-25. Including, selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and the characteristics of the market.

At step 123 of Figure 12, a structure of said market is estimated. Step 123 is further described in detail in process 60 of FIG. 6 including page 41 lines 11-16. Including, selecting at least a first and a second estimated structure of the market.

At step 124 of Figure 12, a bidding behavior is predicted. Step 124 is further described in detail in process 70 of FIG. 7 including page 43 lines 15-22 and page 44 lines 1-5. Including, predicting a first bidding behavior utilizing the first estimated structure of the market, the characteristics of the market and the relevant bidding model; predicting at least a second bidding behavior utilizing at least the second estimated structure of the market, the characteristics of the market and the relevant bidding model.

At step 125 of Figure 12, a first outcome of the market is predicted. Step 125 is further described in detail in process 80 of FIG. 8 including page 44 lines 7-20. Including, predicting a first outcome of the market based on the first bidding behavior and predicting a second outcome of the market based on at least the second bidding behavior. At step 126, the first outcome of the market is evaluated. Step 126 is further described in detail in process 90 of FIG. 9 at page 45 lines 13-17, including the first outcome of the market and at least the second outcome of the market to determine an auction format for the market.

As recited in Claim 17, a “computer readable medium for causing a computer system to execute the steps in a method for determining a auction format for a market” is described. This embodiment is depicted at least in Figures 2-9 and 12. As shown in Figure 12 and described on page 35 lines 19-24, At step 121 of process 120, characteristics of the market are selected. Step 121 is described in further detail in process 40 of FIG. 4.

At step 122 of Figure 12, a relevant bidding model is selected. Step 122 is further described in detail in process 50 of FIG. 5 including page 40 lines 13-25. Including, selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and the characteristics of the market.

At step 123 of Figure 12, a structure of said market is estimated. Step 123 is further described in detail in process 60 of FIG. 6 including page 41 lines 11-16. Including, selecting at least a first and a second estimated structure of the market.

At step 124 of Figure 12, a bidding behavior is predicted. Step 124 is further described in detail in process 70 of FIG. 7 including page 43 lines 15-22 and page 44 lines 1-5. Including, predicting a first bidding behavior utilizing the first estimated structure of the market, the characteristics of the market and the relevant bidding model; predicting at least a second bidding behavior utilizing at least the second estimated structure of the market, the characteristics of the market and the relevant bidding model.

At step 125 of Figure 12, a first outcome of the market is predicted. Step 125 is further described in detail in process 80 of FIG. 8 including page 44 lines 7-20. Including, predicting a first outcome of the market based on the first bidding behavior and predicting a second outcome of the market based on at least the second bidding behavior. At step 126, the first outcome of the market is evaluated. Step 126 is further described in detail in process 90 of FIG. 9 at page 45 lines 13-17, including the first outcome of the market and at least the second outcome of the market to determine an auction format for the market.

VI. Grounds of Rejection to Be Reviewed on Appeal

1. Claims 1, 9 and 17 are rejected under 35 U.S.C. §101 because the invention fails to provide a useful, concrete and tangible result. Dependent Claims 2-8, 10-16 and 18-24 are similarly rejected.

2. Claims 1, 3, 4, 6-9, 11-12, 14-17, 19, 20 and 22-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,871,190 by Seymour et al., hereinafter referred to as the "Seymour" reference.

3. Claims 2, 5, 10, 13, 18 and 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over Seymour in view of U.S. Patent No. 6,285,989 by Shoham, hereinafter referred to as the "Shoham" reference

VII. Argument

1. Whether Claims 1, 9 and 17 are rejected under 35 U.S.C. §101 because the invention fails to provide a useful, concrete and tangible result. Dependent Claims 2-8, 10-16 and 18-24 are similarly rejected.

Claim 1 (and similarly Claims 9 and 17) recite in part:

evaluating said first outcome of said market and at least said second outcome of said market to determine an auction format for said market.

Appellants respectfully reference MPEP 2107.02(IV) which recites in part (emphasis added):

“To properly reject a claimed invention under 35 U.S.C. 101, the Office must (A) make a *prima facie* showing that the claimed invention lacks utility, and (B) provide a sufficient evidentiary basis for factual assumptions relied upon in establishing the *prima facie* showing. *In re Gaubert*, 524 F.2d 1222, 1224, 187 USPQ 664, 666 (CCPA 1975) (“Accordingly, the PTO must do more than merely question operability - it must set forth factual reasons which would lead one skilled in the art to question the objective truth of the statement of operability.”) The *prima facie* showing must be set forth in a well-reasoned statement. Any rejection based on lack of utility should include a detailed explanation why the claimed invention has no specific and substantial credible utility. Whenever possible, the examiner should provide documentary evidence regardless of publication date (e.g., scientific or technical journals, excerpts from treatises or books, or U.S. or foreign patents) to support the factual basis for the *prima facie* showing of no specific and substantial credible utility. If documentary evidence is not available, the examiner should specifically explain the scientific basis for his or her factual conclusions.

Appellants respectfully submit that the Examiner has not satisfied the requirements outlined above. In particular, Appellants respectfully assert that the Examiner has not made a *prima facie* showing that the claimed invention lacks utility and has not provided substantial evidentiary basis relied upon in making a *prima facie* showing. Appellants submit that the statement “[t]he claims are broad and the results are not definite” (see Detailed Action, page 2 Claim Rejection-35 U.S.C. §101) is not sufficient to support a *prima facie* showing. Moreover, no evidentiary support is provided by the Examiner.

Furthermore, Appellants respectfully submit that the result of Claims 1, 9 and 17 are useful, concrete and tangible. Specifically, the present invention evaluates a number of outcomes of a market test and uses the results to determine an auction format. An auction format is a useful, concrete and tangible result. Moreover, Appellants respectfully submit that one of skill in the art at the time of the invention would understand that the process of Claim 16 includes practical utility by determining an auction format for a market. Therefore, Appellants respectfully submit that Claims 1, 9 and 17 overcome the rejection under 35 U.S.C. §101, as Claims 1, 9 and 17 are directed toward patentable subject matter.

For the same reasons Claims 1, 9 and 17 overcome the rejection under 35 U.S.C. §101, Appellants respectfully submit that dependent Claims 2-8, 10-16 and 18-24 similarly overcome the rejection under 35 U.S.C. §101.

2. Whether Claims 1, 3, 4, 6-9, 11-12, 14-17, 19, 20 and 22-24 are unpatentable under 35 U.S.C. §103(a) by the Seymour reference.

Appellants respectfully direct the Examiner to independent Claim 1 that recites that an embodiment of the present invention is directed to (emphasis added):

A method for determining an auction format for a market, said method comprising the steps of:

- selecting characteristics of said market;
- selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market;
- selecting at least a first and a second estimated structure of said market;
- predicting a first bidding behavior utilizing said first estimated structure of said market, said characteristics of said market and said relevant bidding model;
- predicting a first outcome of said market based on said first bidding behavior;
- predicting at least a second bidding behavior utilizing at least said second estimated structure of said market, said characteristics of said market and said relevant bidding model;
- predicting a second outcome of said market based on at least said second bidding behavior; and
- evaluating said first outcome of said market and at least said second outcome of said market to determine an auction format for said market.

Independent Claims 9 and 17 recite similar limitations. Support for the Claimed features can be found throughout the Claims and Specification including page 42 lines 10 through page 43 line 30.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). (MPEP 2143.03).

In the response to arguments section, on page 22 lines 8-14, the Examiner states private information is disclosed and compares the statement “bidder’s willingness to pay” in the present Specification with the teaching of Seymour “price the bidder is willing to pay”. Appellants respectfully submit that these two terms are not analogous. For example, a person may be willing to pay a certain price for a product. If the product goes over the price, then the person is no longer willing to pay for the product. In contrast, a person may really want a product, in that case, the actual price may have no effect on the “bidder’s willingness to pay”. For this reason, Appellants respectfully submit that the private information as claimed is not analogous to, or taught or rendered obvious over Seymour.

Seymour and the claimed invention are very different. Appellants understand Seymour to teach an interactive auction system that automatically generates a selling strategy based on input relating to the merchandise to be auctioned (col. 2, lines 41-43). In particular, Seymour teaches that selling strategy is generated based solely on information input into the system by sellers.

With reference to Figure 5 of Seymour, at step 204, data is entered into the system by a seller concerning the item the seller wishes to sell. This information includes the minimum price the seller is prepared to accept (col. 6, lines 46-52). At step 206, an optimum auction type for the auction is generated based on the input data by a selling strategy generator (col. 6, lines 56-64). In particular, the bidding strategy generator generates the optimal value based on data input by the user. Appellants respectfully submit that Seymour does not teach, describe or suggest that the bidding strategy generator generates the optimal bid “selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market”, as claimed (emphasis added).

In contrast, the claimed embodiment recites “selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market” (emphasis added). Appellants respectfully submit that Seymour teaches the selection of an optimal auction format on the basis of data input into the interactive system by a seller. Appellants respectfully submit that Seymour is silent as to the use of bidder behavior in selecting an optimal auction format. In particular, Appellants respectfully submit that Seymour does not describe, teach or suggest “selecting a relevant bidding model specifying bidder behavior” as claimed. Moreover, Seymour is silent to the use of the use of “information held privately by a bidder” in selecting an optimal auction format.

Furthermore, Appellants respectfully submit that Seymour does not describe, teach or suggest “predicting a bidding behavior” as claimed. In contrast, Appellants respectfully submit that a bidding strategy is selected based on specific data input by a bidder and that a selling strategy is selected based on specific data input by a seller (col. 5, lines 11-15). Accordingly, Seymour does not predict behavior of a bidder, as the bidder’s behavior is either explicitly entered by the bidder, thus not predicted, or is not considered as it is not input by the seller. In particular, Appellants respectfully submit that Seymour is silent as to the use of “bidding behavior”, as claimed.

Also, Appellants respectfully submit that Seymour does not describe, teach or suggest “predicting a first outcome of said market and at least a second outcome of said market” and “evaluating said first outcome of said market and said second outcome of said market to determine an auction format for said market” as claimed.

Examiner cites col. 6, lines 56-59, in supporting the rejection of these limitations. Appellants respectfully submit that the determination of an optimal auction format, as disclosed in the citation, does not teach or render obvious “predicting a first outcome of said market” and “evaluating said first outcome of said market” as claimed. In particular, Appellants respectfully assert that the reference is silent to predicting an outcome and is silent as to evaluating the outcome.

Moreover, Examiner cites col. 6, lines 1-12, in supporting the rejection of these limitations. Appellants respectfully submit that the bidding strategy of Seymour teaches directly away from the present claimed features. Specifically, Seymour teaches a bidding strategy for a bidder to establish an optimum maximum bidding price (emphasis added). This teaching is directly against the Claimed features wherein the predicted bidding behavior is utilized in conjunction with evaluating the first outcome of said market and at least the second outcome of said market to determine an auction format for said market (emphasis added).

That is, the present invention is directed toward a predicted bidding behavior analysis to determine an auction format, while Seymour oppositely teaches a bidding behavior to achieve an optimum maximum bidding price. In other words, the present invention is focused on the auction, while Seymour is focused on the buyer.

Therefore, Appellants respectfully assert that nowhere does Seymour teach, disclose or suggest the claimed embodiments of the present invention as recited in independent Claims 1, 9 and 17, that these claims overcome the rejection under 35 U.S.C. § 103(a), and

are thus in a condition for allowance. Appellants respectfully submit that Seymour also does not teach or suggest the additional claimed features of the present invention as recited in Claims 3, 4 and 6-8 that depend from independent Claim 1, Claims 11-12 and 14-16 that depend from independent Claim 9, and Claims 19, 20 and 22-24 that depend from independent Claim 17. Therefore, Appellants respectfully submit that Claims 3, 4, 6-8, 11-12, 14-16, 19, 20 and 22-24 also overcome the rejection under 35 U.S.C. § 103(a), and are in a condition for allowance as being dependent on allowable base claims.

Regarding the official notice on page 6 in the last paragraph (and again at page 10 lines 1-5, and page 12 lines 16-20), the Examiner states "Official notice is taken that it is old and well-known in the art that information held by a buyer (e.g., amount they are willing to pay, risk tolerance, etc.) coupled with their understanding of existing market conditions (e.g., rules, demand, etc.) influences behavior. For example, investment decisions, auctions, purchasing decisions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Seymour to provide a method further comprising: selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market." Appellants respectfully disagree with the Examiner's assertion. As such, Appellants respectfully request that the Examiner produce authority for this assertion in conjunction with Claims 1, 9 and 17.

Claims 4, 12 and 20

Regarding the official notice on page 14 lines 13-20, the Examiner states "Official notice is taken however, that: to express unobservable variables in terms of observable variables; to create a sample of the data; to use the sample to generate statistical distribution of the sample data; to make estimates or assumptions about the market; and to report upon or generate an output of the results is old and well-known in the art. It is common practice in fields such as mathematics, statistics and economics to use these methodologies for the purpose of using historical data, reasonable assumptions, etc. to make predictions or estimations about the future (e.g., economic predictions, research studies). Thus, it would have been obvious to one of ordinary skill in the art to modify the teachings of Seymour in light of the official notice for the purpose of estimating the structure of said market based on the historical data on record." Appellants respectfully disagree with the Examiner's assertion. As such, Appellants respectfully request that the Examiner produce authority for this assertion in conjunction with Claims 4, 12 and 20.

Moreover, in addition to the obvious shortcomings of the incorrect official notice, Appellants respectfully submit that Claim 4 (and similarly Claims 12 and 20) recite different information than that stated by the examiner, Specifically, Claim 4 (and similarly Claims 12

and 20) recite “expressing unobservable variables in terms of observable bids, wherein said unobservable variables are expressed in terms of observable bids by inverting said bid model; transforming said historical bids data to a sample of inverted bids, wherein said historical bids data are transformed by inverting said bid model; estimating an estimated latent structure of said market, wherein said sample of inverted bids receives application of statistical density estimation techniques to obtain said estimated structure; and outputting said estimated structure.”

Claims 7, 15 and 23

Regarding the official notice on page 16 lines 18-22, the Examiner states "Official notice is taken that receiving a predicted outcome for different scenarios; calculating statistics for each scenario (e.g., mean, variance); ranking scenarios in ascending or descending order in regards to which is the best option; and to report upon or generate an output of the results is old and well-known in the art. It is common practice in fields such as mathematics, statistics and economics to use these methodologies for the purpose of comparison and decision-making (e.g., product purchase decisions; evaluating business opportunities, etc.). Thus, it would have been obvious to one of ordinary skill in the art to modify the teachings of Seymour in light of the official notice for the purpose of evaluating an auction format, comparing different auction formats and ultimately making a decision about the optimal auction format." Appellants respectfully disagree with the Examiner's assertion. As such, Appellants respectfully request that the Examiner produce authority for this assertion in conjunction with Claims 7, 15 and 23.

Moreover, in addition to the obvious shortcomings of the incorrect official notice, Appellants respectfully submit that Claim 7 (and similarly Claims 15 and 23) recite different information than that stated by the examiner, Specifically, Claim 7 (and similarly Claims 15 and 23) recite “receiving a third user input, wherein said third user input comprises a plurality of candidate auction formats; receiving a predicted outcome for each said candidate auction format; calculating descriptive statistics for each said candidate auction format, wherein said descriptive statistics comprise a mean and a variance; ranking each said candidate auction format with respect to said calculated mean and generating corresponding rankings for said plurality; and outputting said descriptive statistics and said rankings.”

Claims 8, 16 and 24

Regarding the official notice on page 17 lines 20-22, the Examiner states "Thus, it would have been obvious to one of ordinary skill in the art to modify the teachings of Seymour in view of the Official notice for the purpose of evaluating an auction format, comparing different auction formats and ultimately making a decision about the optimal

auction format." Appellants respectfully disagree with the Examiner's assertion. As such, Appellants respectfully request that the Examiner produce authority for this assertion in conjunction with Claims 8, 16 and 24.

In summary, Appellants respectfully submit that the Examiner's rejections of the Claims are improper as the rejection of Claims 1, 3, 4, 6-9, 11-12, 14-17, 19, 20 and 22-24 does not satisfy the requirements of a *prima facie* case of obviousness as claim limitations are not met by the cited reference and there is no suggestion or motivation to combine the references. Accordingly, Appellants respectfully submit that the rejection of Claims 1, 3, 4, 6-9, 11-12, 14-17, 19, 20 and 22-24 under 35 U.S.C. §103(a) is improper and should be reversed.

3. Whether Claims 2, 5, 10, 13, 18 and 21 are unpatentable under 35 U.S.C. §103(a) by Seymour in view of Shoham.

Claims 2 and 5 are dependent on independent Claim 1, Claims 10 and 13 are dependent on independent Claim 9, and Claims 18 and 21 are dependent on independent Claim 17. Appellants have reviewed the cited references and respectfully submit that the present invention as recited in Claims 2, 5, 10, 13, 18 and 21 is not unpatentable over Seymour in view of Shoham for the following rationale.

As described above, Seymour and the claimed invention are very different. Appellants understand Seymour to teach that an optimal bidding strategy determination is based solely on data input by the user. Appellants respectfully submit that Seymour does not teach, describe or suggest that the bidding strategy generator generates the optimal bid “selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market”, as claimed (emphasis added).

Specifically, Appellants respectfully submit that Seymour teaches the selection of an optimal auction format on the basis of data input into the interactive system by a seller. Appellants respectfully submit that Seymour is silent as to the use of bidder behavior in selecting an optimal auction format. In particular, Appellants respectfully submit that Seymour does not describe, teach or suggest “selecting a relevant bidding model specifying bidder behavior” as claimed. Moreover, Seymour is silent to the use of the use of “information held privately by a bidder” in selecting an optimal auction format. In contrast, Appellants respectfully submit that by determining an optimal auction format on the basis of information solely entered by the seller, Seymour teaches away from “selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market”, as claimed.

Furthermore, Appellants respectfully submit that Seymour does not describe, teach or suggest “predicting a bidding behavior” as claimed. In contrast, Appellants respectfully submit that a bidding strategy is selected based on specific data input by a bidder and that a selling strategy is selected based on specific data input by a seller (col. 5, lines 11-15). Accordingly, Seymour does not predict behavior of a bidder, as the bidder’s behavior is either explicitly entered by the bidder, thus not predicted, or is not considered as it is not input by the seller. In particular, Appellants respectfully submit that Seymour is silent as to the use of “bidding behavior”, as claimed.

Moreover, the combination of Seymour and Shoham fails to teach or suggest this claim limitation because Shoham does not overcome the shortcomings of Seymour. Appellants understand Shoham to teach a universal auction specification system (Abstract). Appellants respectfully submit that Seymour does not teach, describe or suggest that the bidding strategy generator generates the optimal bid “selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market”, as claimed (emphasis added).

Therefore, Appellants respectfully assert that nowhere does the combination of Seymour in view of Shoham teach, disclose or suggest the claimed embodiments of the present invention as recited in independent Claims 1, 9 and 17, that these claims overcome the rejection under 35 U.S.C. § 103(a), and are thus in a condition for allowance. Appellants respectfully submit the combination of Seymour in view of Shoham also does not teach or suggest the additional claimed features of the present invention as recited in Claims 2 and 5 are dependent on independent Claim 1, Claims 10 and 13 are dependent on independent Claim 9, and Claims 18 and 21 are dependent on independent Claim 17. Therefore, Appellant respectfully submits that Claims 2, 5, 10, 13, 18 and 21 also overcome the rejection under 35 U.S.C. § 103(a), and are in a condition for allowance as being dependent on allowable base claims.

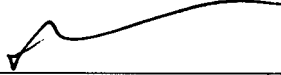
In summary, Appellants respectfully submit that the Examiner’s rejections of the Claims are improper as the rejection of Claims 2, 5, 10, 13, 18 and 21 does not satisfy the requirements of a *prima facie* case of obviousness as claim limitations are not met by the cited reference and there is no suggestion or motivation to combine the references. Accordingly, Appellants respectfully submit that the rejection of Claims 2, 5, 10, 13, 18 and 21 under 35 U.S.C. §103(a) is improper and should be reversed.

Conclusion

Appellants respectfully request that the rejection of Claims 1-24 be reversed. The Appellants wish to encourage the Examiner or a member of the Board of Patent Appeals to telephone the Appellants' undersigned representative if it is felt that a telephone conference could expedite prosecution.

Dated: 5/22/ 2007

Respectfully submitted,
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VIII. Appendix - Clean Copy of Claims on Appeal

1. (Previously Presented) A method for determining an auction format for a market, said method comprising the steps of:
 - selecting characteristics of said market;
 - selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market;
 - selecting at least a first and a second estimated structure of said market;
 - predicting a first bidding behavior utilizing said first estimated structure of said market, said characteristics of said market and said relevant bidding model;
 - predicting a first outcome of said market based on said first bidding behavior;
 - predicting at least a second bidding behavior utilizing at least said second estimated structure of said market, said characteristics of said market and said relevant bidding model;
 - predicting a second outcome of said market based on at least said second bidding behavior; and
 - evaluating said first outcome of said market and at least said second outcome of said market to determine an auction format for said market.
2. (Previously Presented) The method as recited in Claim 1, wherein said selecting characteristics of said market step comprises the steps of:
 - receiving a first user input, wherein said first user input comprises information identifying an item to be auctioned;
 - accessing a database;
 - retrieving from said database historical bids data;
 - retrieving from said database auction characteristics data, wherein said auction characteristics comprise information relating to historical auctions of similar items;
 - outputting said historical bids data; and
 - outputting said auction characteristics data.
3. (Previously Presented) The method as recited in Claim 1, wherein said selecting a relevant bidding model step comprises the steps of:
 - receiving auction characteristics data;
 - accessing a database;
 - retrieving from said database a relevant bidding model, wherein said bidding model is selected based on a corresponding relevance of said auction characteristics data; and
 - outputting said relevant bidding model.

4. (Previously Presented) The method as recited in Claim 1, wherein said estimating a structure of said market step comprises the steps of:
- receiving said relevant bidding model;
 - receiving historical bids data;
 - expressing unobservable variables in terms of observable bids, wherein said unobservable variables are expressed in terms of observable bids by inverting said bid model;
 - transforming said historical bids data to a sample of inverted bids, wherein said historical bids data are transformed by inverting said bid model;
 - estimating an estimated latent structure of said market, wherein said sample of inverted bids receives application of statistical density estimation techniques to obtain said estimated structure; and
 - outputting said estimated structure.
5. (Original) The method as recited in Claim 1, wherein said bidding model has embedded an unknown structure, and wherein said predicting a bidding behavior step comprises the steps of:
- receiving said estimated structure;
 - receiving said relevant bidding model;
 - substituting said estimated structure for said unknown structure; and
 - outputting a prediction of bidding behavior.
6. (Original) The method as recited in Claim 1, wherein said predicting a first outcome of said market step comprises the steps of:
- receiving a second user input, wherein said second user input comprises:
 - an evaluation criterion;
 - a candidate auction format; and
 - a constraint;
 - receiving said estimated structure;
 - receiving said bidding behavior prediction for said candidate auction format, wherein said bidding behavior prediction further comprises a prediction under said constraint;
 - obtaining a value of said evaluation criterion, wherein said value is based on said estimated structure, said bidding behavior prediction, said candidate auction format, and said constraint, said value comprising said first predicted outcome; and
 - outputting said value.

7. (Original) The method as recited in Claim 1, wherein said evaluating said first outcome of said market step comprises the steps of:

receiving a third user input, wherein said third user input comprises a plurality of candidate auction formats;

receiving a predicted outcome for each said candidate auction format;

calculating descriptive statistics for each said candidate auction format, wherein said descriptive statistics comprise a mean and a variance;

ranking each said candidate auction format with respect to said calculated mean and generating corresponding rankings for said plurality; and

outputting said descriptive statistics and said rankings.

8. (Original) The method as recited in Claim 7, wherein said evaluating said first outcome of said market step further comprises the steps of:

selecting a best auction format, wherein said best auction format comprises the candidate auction format within said plurality having the highest said ranking; and
outputting said best auction format.

9. (Previously Presented) A computer system comprising:
a bus;
a memory interconnected with said bus; and
a processor interconnected with said bus, wherein said processor executes a method for determining an auction format for a market, said method comprising the steps of:

selecting characteristics of said market;

selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market;

selecting at least a first and a second estimated structure of said market;

predicting a first bidding behavior utilizing said first estimated structure of said market, said characteristics of said market and said relevant bidding model;

predicting a first outcome of said market based on said first bidding behavior;

predicting at least a second bidding behavior utilizing at least said second estimated structure of said market, said characteristics of said market and said relevant bidding model;

predicting a second outcome of said market based on at least said second bidding behavior; and

evaluating said first outcome of said market and at least said second outcome of said market to determine an auction format for said market.

10. (Previously Presented) The system as recited in Claim 9, wherein said selecting characteristics of said market step of said method comprises the steps of:
receiving a first user input, wherein said first user input comprises information identifying an item to be auctioned;
accessing a database;
retrieving from said database historical bids data;
retrieving from said database auction characteristics data, wherein said auction characteristics comprise information relating to historical auctions of similar items;
outputting said historical bids data; and
outputting said auction characteristics data.
11. (Previously Presented) The system as recited in Claim 9, wherein said selecting a relevant bidding model step of said method comprises the steps of:
receiving auction characteristics data;
accessing a database;
retrieving from said database a relevant bidding model, wherein said bidding model is selected based on a corresponding relevance of said auction characteristics data; and
outputting said relevant bidding model.
12. (Previously Presented) The system as recited in Claim 9, wherein said estimating a structure of said market step of said method comprises the steps of:
receiving said relevant bidding model;
receiving historical bids data;
expressing unobservable variables in terms of observable bids, wherein said unobservable variables are expressed in terms of observable bids by inverting said bid model;
transforming said historical bids data to a sample of inverted bids, wherein said historical bids data are transformed by inverting said bid model;
estimating an estimated latent structure of said market, wherein said sample of inverted bids receives application of statistical density estimation techniques to obtain said estimated structure; and
outputting said estimated structure.
13. (Original) The system as recited in Claim 9, wherein said bidding model has embedded an unknown structure, and wherein said predicting a bidding behavior step of said method comprises the steps of:
receiving said estimated structure;

receiving said relevant bidding model;
substituting said estimated structure for said unknown structure; and
outputting a prediction of bidding behavior.

14. (Original) The system as recited in Claim 9, wherein said predicting a first outcome of said market step of said method comprises the steps of:

receiving a second user input, wherein said second user input comprises:

an evaluation criterion;
a candidate auction format; and
a constraint;

receiving said estimated structure;
receiving said bidding behavior prediction for said candidate auction format,
wherein said bidding behavior prediction further comprises a prediction under said constraint;

obtaining a value of said evaluation criterion, wherein said value is based on said estimated structure, said bidding behavior prediction, said candidate auction format, and said constraint, said value comprising said first predicted outcome; and
outputting said value.

15. (Original) The system as recited in Claim 9, wherein said evaluating said first outcome of said market step of said method comprises the steps of:

receiving a third user input, wherein said third user input comprises a plurality of candidate auction formats;

receiving a predicted outcome for each said candidate auction format;
calculating descriptive statistics for each said candidate auction format,
wherein said descriptive statistics comprise a mean and a variance;

ranking each said candidate auction format with respect to said calculated mean and generating corresponding rankings for said plurality; and
outputting said descriptive statistics and said rankings.

16. (Original) The system as recited in Claim 15, wherein said evaluating said first outcome of said market step of said method further comprises the steps of:

selecting a best auction format, wherein said best auction format comprises the candidate auction format within said plurality having the highest said ranking; and
outputting said best auction format.

17. (Previously Presented) A computer readable medium for causing a computer system to execute the steps in a method for determining a auction format for a market, said method comprising the steps of:

- selecting characteristics of said market;
- selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market;
- selecting at least a first and a second estimated structure of said market;
- predicting a first bidding behavior utilizing said first estimated structure of said market, said characteristics of said market and said relevant bidding model;
- predicting a first outcome of said market based on said first bidding behavior;
- predicting at least a second bidding behavior utilizing at least said second estimated structure of said market, said characteristics of said market and said relevant bidding model;
- predicting a second outcome of said market based on at least said second bidding behavior; and
- evaluating said first outcome of said market and at least said second outcome of said market to determine an auction format for said market.

18. (Previously Presented) The computer readable medium as recited in Claim 17, wherein said selecting characteristics of said market step of said method comprises the steps of:

- receiving a first user input, wherein said first user input comprises information identifying an item to be auctioned;
- accessing a database;
- retrieving from said database historical bids data;
- retrieving from said database auction characteristics data, wherein said auction characteristics comprise information relating to historical auctions of similar items;
- outputting said historical bids data; and
- outputting said auction characteristics data.

19. (Previously Presented) The computer readable medium as recited in Claim 17, wherein said selecting a relevant bidding model step of said method comprises the steps of:

- receiving auction characteristics data;
- accessing a database;
- retrieving from said database a relevant bidding model, wherein said bidding model is selected based on a corresponding relevance of said auction characteristics data; and
- outputting said relevant bidding model.

20. (Previously Presented) The computer readable medium as recited in Claim 17, wherein said estimating a structure of said market step of said method comprises the steps of:

- receiving said relevant bidding model;
- receiving historical bids data;
- expressing unobservable variables in terms of observable bids, wherein said unobservable variables are expressed in terms of observable bids by inverting said bid model;
- transforming said historical bids data to a sample of inverted bids, wherein said historical bids data are transformed by inverting said bid model;
- estimating an estimated latent structure of said market, wherein said sample of inverted bids receives application of statistical density estimation techniques to obtain said estimated structure; and
- outputting said estimated structure.

21. (Original) The computer readable medium as recited in Claim 17, wherein said bidding model has embedded an unknown structure, and wherein said predicting a bidding behavior step of said method comprises the steps of:

- receiving said estimated structure;
- receiving said relevant bidding model;
- substituting said estimated structure for said unknown structure; and
- outputting a prediction of bidding behavior.

22. (Original) The computer readable medium as recited in Claim 17, wherein said predicting a first outcome of said market step of said method comprises the steps of:

- receiving a second user input, wherein said second user input comprises:
 - an evaluation criterion;
 - a candidate auction format; and
 - a constraint;
- receiving said estimated structure;
- receiving said bidding behavior prediction for said candidate auction format, wherein said bidding behavior prediction further comprises a prediction under said constraint;
- obtaining a value of said evaluation criterion, wherein said value is based on said estimated structure, said bidding behavior prediction, said candidate auction format, and said constraint, said value comprising said first predicted outcome; and
- outputting said value.

23. (Original) The computer readable medium as recited in Claim 17, wherein said evaluating said first outcome of said market step of said method comprises the steps of:
receiving a third user input, wherein said third user input comprises a plurality of candidate auction formats;

receiving a predicted outcome for each said candidate auction format;
calculating descriptive statistics for each said candidate auction format,
wherein said descriptive statistics comprise a mean and a variance;
ranking each said candidate auction format with respect to said calculated mean and generating corresponding rankings for said plurality; and
outputting said descriptive statistics and said rankings.

24. (Original) The computer readable medium as recited in Claim 23, wherein said evaluating said first outcome of said market step of said method further comprises the steps of:

selecting a best auction format, wherein said best auction format comprises the candidate auction format within said plurality having the highest said ranking; and
outputting said best auction format.

IX. Evidence Appendix

No evidence is herein appended.

X. Related Proceedings Appendix

No related proceedings.